Rapid Eye™ Multi-Media

Version 5

Video, Audio, Data—Live or Recorded—Any Site, Anytime, Anywhere

ADEMCO Video Systems introduces Rapid Eye Multi-Media™ (REMM), our premier Digital Recording and Transmission system. More than a DVR, Rapid Eye Multi-Media provides a powerful, intelligent enterprise-class digital storage management tool that combines Video, Audio, and Data capabilities in a single remote unit. The system is designed to record, search and transmit your Video, Audio and Data transactions—providing users with both live and post-event assessment options.

The system consists of three major components which include: the **Remote Unit (RU)**, featuring LocalView, the local user interface that provides on-site video management capabilities and basic system and camera configuration; **ADMIN Software**, the workstation/server-based administration tool capable of enterprise-wide site and user management; **VIEW Software**, the feature-rich, workstation-based operator program. The powerful combination of ADMIN and VIEW truly differentiate the REMM system from the competition.

REMM can be seamlessly integrated with existing video equipment and incorporated into any TCP/IP and/or Dial-up network—making it one of the most cost-effective solutions for both new and existing video security systems.

Enterprise-class Long-term Digital Storage System

SYSTEM FEATURES:

- Available in 36 different configurations: Select the right RU for every application
- VxWorks™ – a secure, stable and multi-tasking real-time operating system (Remote Unit)
- ADMIN and VIEW software provide user friendly GUI - Windows®, 98/NT/ME/2000/XP compatible
- Long-term digital storage for recorded Video, Audio and Data information - RU rated at 250 - 3000 Camera Days for typical installation (actual camera days achieved is application-dependent and will vary with each installation)
- Field expandable digital storage using REMM's RU Hard Drive expansion kits (additional capacity dependent upon original RU configuration)
- Authenticated proprietary file format (REM) for integrity of evidence
- Extremely flexible communication options include LAN, WAN, Internet and PSTN
- Standard equipment on all RUs include a NIC 10/100 BaseT, RJ45, Ethernet connection and a TELCO internal 56K modem, RJ11 PSTN connection (ISDN and DSL connections using additional hardware)

- Easy integration with existing and new CCTV equipment
- Live monitoring and surveillance of multiple remote locations simultaneously via LAN/WAN or Dial-up connections
- Multiple users can simultaneously access same site for live and/or recorded information via LAN/WAN or Dial-up connections
- RapidSearch™ events by Motion, Time/Date making locating and playback of recorded Video, Audio and Data quick and easy
- User-definable reporting of events and alarms automatically to multiple remote locations via LAN/WAN or Dial-up connections
- Automated remote site touring - Administrator-definable and assignable by user
- Administrator-definable user names and privileges, featuring encrypted password protection
- User configuration and control of eight auxiliary TTL outputs
- Serial port control of most industry standard PTZ domes
- Serial port connection to ATM and POS devices

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RapidEye™ Multi-Media

Remote Unit

The RU is the heart of the REMM system and designed to satisfy the security industry's growing demand for an integrated video security tool. The RU was engineered from its inception for durability and expandability to meet the stringent requirements of today's security environment.
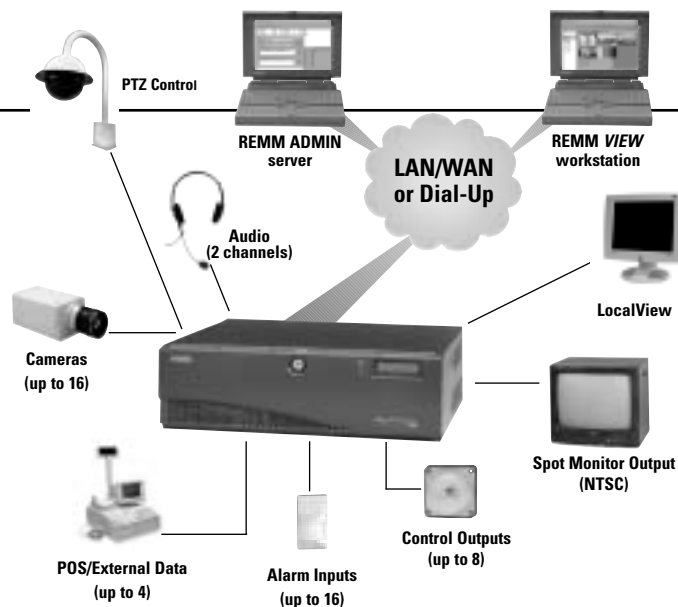
The new rugged chassis offers a sleek, modular design suited for desktop or rack-mount installations. It fits perfectly into a standard 19" EIA rack and can be fitted with the optional slide rack-mount kit (ARMSLIDE) that makes servicing your installation simple. The removable front panel features a key lock, concealing four field-replaceable/expandable hard drive bays; the optional CD-RW drive for creating evidence clips of your security data locally at

the RU site; and red power button for front panel power control. The detachable rear BNC panel allows servicing of the unit without the removal or disruption of your coaxial cable leads. The RU is equipped with two independent 2-way audio channels that offer users the ability to monitor and record synchronized audio streams. Data handling capabilities enable the RU to connect with a growing list of POS devices such as cash registers and ATMs for monitoring, recording and retrieval of critical business data. All physical connections are made directly to the RU, including 16 cameras, 16 alarm input devices, eight auxiliary control outputs, two serial ports for control of most industry standard PTZ domes, and connection to POS and ATM devices. Using our multi-port protocol interface translator (AVBPIT4POS) up to four POS or ATM devices can be connected to a single serial port on the RU.

The REMM RU is offered in 36 standard configurations, making it one of the most versatile products in the industry. This versatility focuses on real issues confronting users of digital recording products today including, length of time for storage of video, video capture rate (ips), and the option to record incident clips to a CD-RW at the RU site. Our intuitive RU model number allows you to configure the right unit for every application. (See ordering information on back.)

LocalView

LocalView, the local user interface, enables the user to define basic system and camera configurations and view live and recorded video at the RU site. LocalView features three levels of password protected security: Administrator, Clip user and Cycle. Using only a VGA monitor (not supplied), and a PS2 mouse (supplied), the user can configure system and network settings such as: Unit Name, Time Zone, Date, IP address, Network Mask and Gateway. Camera configurations include: Live Video window, Settings box for manual and AGC controls, Selected Camera box for Name and Type (camera) designation, and a Recording box for Rate (capture) and Quality settings. Video management capabilities include: four Live Video tabs that are individually configurable by selecting from one of 12 pre-defined camera grids. The grids range from a single camera to a 4x4 matrix, allowing a multiplexed view of all 16 cameras in a single panel. The Live video tabs can be made to cycle through automatically, creating a user-definable "Live Tour" of all cameras attached to the RU.
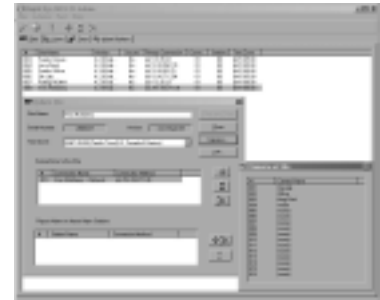
Recorded video can also be reviewed and played back in its own video tab called Clip Builder. Clip Builder can be arranged in any of the 12 pre-defined grids allowing up to 16 video streams to be displayed. Clip Builder also provides a utility to create a video clip using Start and Stop times. A user can store the clip to the RU's hard drive or directly to a CD-RW if the unit is equipped with the optional CD-RW drive. The Clip Player tab provides a utility to review a pre-recorded clip from the RU's hard drive, or from a previously-recorded CD, loaded in the CD-RW drive. Both Clip Builder and Clip Player provide mouse-selectable, VCR-like controls, such as, Play, Pause, Fast Forward and Rewind.

ADMIN Software (ARM5ADMIN)

ADMIN Software, REMM's system administration tool, is capable of enterprise-wide site, user, tour and alarm station management. This Windows-based administration software provides a user-friendly GUI for creating REMM's database. The database can be as small as a single site with a sole user, based on a single computer, using Microsoft Access as the default database. ADMIN can also be hosted on a network server using any of these common networked database protocols including, Access, SQL or MSDE, serving thousands of users and sites. ADMIN makes controlling and administering a multi-site, multi-user, enterprise-wide system fast, easy and secure.

ADMIN **software**

VIEW Software (ARM5VIEW)

VIEW Software is the feature-rich, Windows-based operator software that provides a user-friendly GUI for complete operation and configuration of one or many different RUs simultaneously. Observe and monitor Live or Recorded Video, Audio and Data from any RU listed in your Site Tab. Connect to multiple sites simultaneously using multiple connection methods from the same or multiple workstations and connect to the same RU site using multiple connection methods. LAN/WAN networks and Dial-up connections are supported with a standard TCP/IP protocol. Dial-up connections can be made using PSTN or ISDN with appropriate hardware.

VIEW **software**

Control multiple PTZ cameras, monitor two independent 2-way audio channels, monitor up to four streams of POS or ATM generated data, configure 16 alarm input devices, and control eight auxiliary outputs—all from within a single session of VIEW. Define event and alarm conditions including motion detection on a per-camera basis. Search for events, logs and data strings and review the associated Video, Audio and Data instantly using the RapidSearch™ feature in VIEW.

VIDEO Features:

- 16 BNC composite video looping inputs with auto termination
- RU available with capture rates of 20, 40 or 60 ips, shared between recording and live transmission
- Individual camera configuration including name, camera type, manual or AGC control of video image, Recording Rate in ips and image quality
- Advanced video motion detection with user-definable exclusion zones per camera
- Auto detection and changeover of camera type from color to monochrome in low light situations (when using color/monochrome changeover cameras)
- LocalView – the local user interface provides on-site live monitoring, review of recorded video, local clip generation and record clip to a CD-RW on RU equipped with CD-RW drive
- User-configurable composite monitor sequential switching output

AUDIO Features:

- Two independent channels synchronized with the video and data streams
- Bi-directional Audio – The VIEW operator can talk and/or listen on each channel independently, directly to the remote site(s)
- Monitor, record and record-to-clip with associated video and data streams

DATA Features:

- Monitor and record critical business data from ATM and POS devices
- Review and search recorded data using our data search engine; review associated video stream
- Support for up to four separate data sources, with each data stream displayed as an individual window within the VIEW environment (additional hardware required)

SPECIFICATIONS:

Remote Unit Hardware Capacity

Connections	Max per Remote Unit
Cameras	16
Inputs (alarms)	16
Outputs (control)	8
Audio	2

RapidEye VIEW Software Capacity

Sessions	Max per Remote Unit
Live video sessions (all users)	32 streams
Video retrieval sessions (all users)	32 streams
Users viewing live video (and activating outputs)	10 sessions
Users retrieving video	10 sessions
Users accessing alarms	10 sessions
Users accessing events	10 sessions
Users accessing Maintenance	1 session

ADMIN and VIEW Workstation Requirements

(Minimum recommendations)
- IBM-compatible PC
- Microsoft Windows 98, NT, ME, 2000 or XP
- Pentium II or Pentium III class CPU (min. 600MHz recommended)
- 128MB RAM
- 200MB of free hard disk space, plus adequate storage for video clips
- CD-ROM (for software installation and upgrades)
- Video card(s) and monitor(s) that supports SVGA mode (800x600 pixels) or better (XGA 1024x768 preferred)
- Mouse or other Windows compatible pointing device
- For Dial-up connections [1] - ADEMCO approved V.90/V.92 modem or ISDN modem
- For LAN connections - Windows compatible 10/100 Fast Ethernet Network Interface Card (NIC) configured for TCP/IP protocol

Remote Unit Specifications
- Video Standards:
  – NTSC/EIA or PAL/CCIR
  – Individual AGC profile and configuration settings for each camera
- Video Format:
  – 320 x 192 native resolution REM proprietary format
  – 24-bit true color (over 16 million colors)
- Record and Transmission Format: modified H.261/263 (DCT) w/proprietary Dual Threshold processing yielding high quality vs. bit rate
- Record Mode: continuous circular buffer (FIFO)
- System Record Capacity: 250, 500, 750, 1000, 2000 or 3000 camera days (based on model)

- System Update Rate: (maximum)
  – 20, 40 or 60 ips (based on model)
  – Individual camera selectable from 1/4 to 30 ips
- Video Quality Settings: 12-1
  – 12 = highest quality, shortest record duration
  – 1 = lowest quality, longest record duration
- Video Motion Detection and Search:
  – User-configurable to sense mass and motion intensity within multiple regions-of-interest
  – User-configurable post event video motion search within multiple regions-of-interest
- POS/ATM and Event/Alarm Action Filters:
  – Initiate action and/or report upon specific serial data or event transactions
  – Post-event search of a specific recorded data stream qualifier
- Record and Remote Reporting of Events:
  – Session request
  – Session rejection
  – Session disconnect
  – Run-time failure
  – Self restart
  – Reboot
  – Synchronize time
  – System configuration
  – Security modification
  – System file modification
  – Clear storage
  – Input sensor activation/deactivation
  – Output sensor activation/deactivation
  – Video loss/restore
  – Video motion detection
  – POS/ATM data
- Mass Storage: [4] Field-Upgradeable Hard Drive Bays
  – All drives mounted on field serviceable carrier sleds
  – Convenient upgrading and servicing of local storage
  – Power-Off, "Cold Swap" operation
- Removable Media: [1] Field Upgradeable CD/RW Bay
  – Supports optional CD/RW drive for event backup and archiving
  – 2nd aux. device bay reserved for future expansion
- Front Panel Control and Display Module: (secured behind lockable front panel)
  – Power Switch (low voltage control)
  – System Ready LED
  – Alarm State LED
  – HD Activity LED
  – 2x16 alphanumeric system status LCD display indicating operational status and system health monitoring

Note: 1 ADEMCO approved PC modems at time of this printing include: Zoom Model 2920 internal PCI modem, Zoom Model 3049L external serial modem and Zoom Model 3075 PCMCIA modem. Contact ADEMCO representative for latest approved models.

Rear Panel Connections

- Video Inputs: [16] composite 1Vp-p
  - Looping BNC w/ 75 Ohm auto-termination
  - Removable rear connector panel for convenient servicing

- Video Outputs: [2] composite 1Vp-p
  - Monitor 1: NTSC/PAL spot or sequential real-time switcher
  - Monitor 2: NTSC/PAL color bar test pattern

- Audio Inputs: [2] line level
  - Line inputs via 3.5mm stereo mini jack
  - Mic-In: reserved for future use

- Audio Outputs: [2] Line Level
  - Line outputs via 3.5mm stereo mini jack

- Alarm/Control Inputs: [16]
  - TTL level, dry contact or EOL (end-of-line) resistor sensing
  - Software configured as NC, NO or 2K EOL
  - Removable 5mm terminal block plugs

- General Purpose Control Outputs: [8] 5V TTL
  - Removable 5mm terminal block plugs
  - 50mA max @ 5V each output

- Serial Ports: [2] RS-232
  - COM1: DB9 (M) external modem, PTZ control or POS/ATM (cables provided)
  - COM2: RJ45 PTZ control or hyper terminal configuration (cable & adapters provided)

- Modem/Telco: [1] V.90 Multi-Protocol Modem
  - 19.2Kbps to 33.6Kbps on typical North American dial-up connection
  - Standard RJ11 handset cable interface (cable provided)

- Networking: [1] 10/100 BaseT Fast Ethernet
  - Standard RJ45 supporting CAT5 cable plug

- Desktop Monitor: [1] VGA
  - Supports LocalView UI through standard analog desktop monitor (640x480 support required)
  - Supports remote analog composite monitor through VGA–NTSC/PAL converter

- PS2 Mouse: [1] 6pin MiniDIN
  - Supports LocalView UI functions (PS2 mouse provided)

- PS2 Keyboard: [1] 6pin MiniDIN
  - Not required for operation

- Printer Port: reserved for future use

- USB Ports: [4] reserved for future use

- AC Power: [1] 115VAC or 230VAC 50/60Hz input
  - Modular IEC-320 connector (regional power cord provided)

PTZ Dome Control

- ADEMCO Video RapidDome and Orbiter Domes using VCL code

- Ultrak Domes KD6 Series using VCL or Pelco P or D code

Also compatible with other manufacturers including:

- Javelin 308 Series
- Kalatel
- Pelco P&D codes
- Sensormatic RS422

Electrical

- Power Requirements:
  - 1.2A @ 115VAC (138VA), 60Hz
  - 0.6A @ 230VAC (138VA), 50Hz
  - Selectable 115V/230V operation via guarded front accessible PS switch

Mechanical

- Desktop or rack mount configurable:
  - Removable rack ears
  - EIA 19" rack mount slide kit available as an option
  - All critical components secured behind lockable front panel

- Dimensions:
  - 5.23" (3RU) H x 17.3" W x 18.8" D (133mm H x 440mm W x 478mm D)
  - 17.4" (442mm) unit depth without removable front panel

- Weight: (model dependent)
  - Unit weight: 32lbs - 42lbs (14.5kg - 19kg)
  - Shipping weight: 38lbs - 48lbs (17.5kg - 22kg)

Environmental

- Operating Temperature:
  - Non-condensing, 40° to 104° F (5° to 40°C)

Regulatory

- Emissions
  - FCC: Part15, Class B
  - CE: EN50081-1, (Class B)
- Immunity
  - CE: EN50130-4 (w/use of UPS)
- Safety
  - UL-Listed for U.S. and Canada:
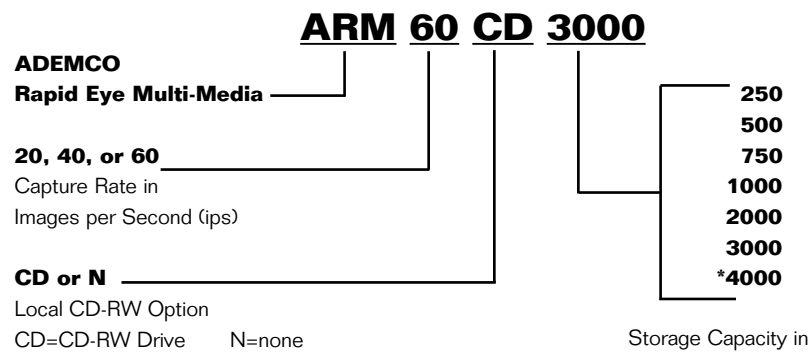 - UL 1950, CAN/CSA-C22.2 No. 950-95
  - CE: EN60950

TOTAL NUMBER OF IMAGES PER SECOND (examples)

RU Capacity (Camera Days)	1	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60
250	250	62	31	21	16	12	10	9	8	7	6	6	5	5	4	4
500	500	125	62	42	31	25	21	18	16	14	12	11	10	10	9	8
750	750	187	94	62	47	37	31	27	23	21	19	17	16	14	13	12
1000	1000	250	125	83	62	50	42	36	31	28	25	23	21	19	18	17
2000	2000	500	250	167	125	100	83	71	62	56	50	45	42	38	36	33
3000	3000	750	375	250	187	150	125	107	94	83	75	68	62	58	54	50
4000	4000	1000	500	333	250	200	167	143	125	111	100	91	83	77	71	67

Typical Number of Days of Recorded Video

Estimating the number of days a Rapid Eye Multi-Media Remote Unit will record: (See web site for storage calculator.)

- Based on your application need, determine each camera's desired update rate (in images per second). Sum total of all cameras' ips cannot exceed RU ratings.
- If all cameras are set for the same update rate, simply multiply the update rate times the total number of cameras, (e.g., 2 cameras x 8 ips = 16 total ips).
- If all cameras are not set for the same update rate, add each camera's update rate (in images per second) together (e.g., 6 ips for camera one + 10 ips for camera two = 16 ips total).
- Locate your total images per second in the chart above. The column underneath helps you select the appropriate RU for your application's record duration requirements.
- The above table shows typical durations that assume: a quality setting of 7 and no audio or data recording; securely mounted cameras with wide angle lenses; up to two non-auto-panning domes (pre-set operation recommended).
- Record duration, or the quantity of images that can be recorded on RU hard drives, can vary from half to two times the typical results shown in the chart above.

ORDERING:

REMM: Remote Unit Model Numbers

ARM 60 CD 3000

ADEMCO Rapid Eye Multi-Media

20, 40, or 60
Capture Rate in
Images per Second (ips)

CD or N
Local CD-RW Option
CD=CD-RW Drive   N=none

* Check with your sales representative for the availability of our 4000-Day unit coming soon.

250
500
750
1000
2000
3000
*4000

Storage Capacity in Camera Days

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REMM Software Part Numbers

MODEL NUMBER	DESCRIPTION
ARM5ADMIN	ADMIN & VIEW Software CD & User Manuals
ARM5VIEW	VIEW Software CD & User Manual
ARM5UPADMIN	ADMIN & VIEW Upgrade Software CD
ARMCLIP	Clip Player for Windows

REMM Accessories

MODEL NUMBER	DESCRIPTION
AAC232/485	Code Converter, RS232 to RS485
ACSP1	Camera Surge Protector, Power and Video
ADCD8TP	Code Distributor, 8x RS485 outputs
ADSP1	Dome Surge Protector, Power, Video and Data
ARMCDRW	REMM CD-RW Drive Accessory Kit
ARMHD500	REMM HD Expansion 500 Camera Days
ARMHD750	REMM HD Expansion 750 Camera Days
ARMHD1000	REMM HD Expansion 1000 Camera Days
ARMHD1500	REMM HD Expansion 1500 Camera Days
ARMSLIDE	REMM Rack Mount Slide Kit
ASP16	RU Surge Protector, Battery Backup
ASP16RMK	Rack Mount Kit for ASP16
AVBPITPOS	Single Port PIT, POS, RS232/RS232
AVBPIT4POS	Four Port PIT, POS, RS232/RS232

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